

Graduate Studentship in Biochemistry and Molecular of Poplar Phenolic Biosynthesis

Constabel Lab, Centre for Forest Biology & Biology Department, University of Victoria, Victoria, British Columbia

A PhD or MSc student position is available immediately for an ongoing research project on the biochemistry of plant defense in poplar (*Populus* spp). The primary objective is to characterize enzymes in the biosynthetic pathway of the salicinoids, major anti-herbivory phenolic chemicals found in poplar and willows. Despite their ecological and potential medicinal importance, their biosynthesis is not known.

The student project will involve the validation of candidate genes using genomic analyses, characterization of recombinant enzymes, and generation and analysis of CRISPR-modified transgenic poplars. These approaches have all been successfully applied to identifying and studying novel enzymes in my lab. Phenolics and tannins are abundant in poplars, and with extensive genomics resources and amenability to genetic transformation, *Populus* is an outstanding experimental system for phenolic biochemistry. The lab is equipped for biochemistry and recombinant protein studies, enzyme analysis, molecular biology, plant tissue culture, and phytochemical analysis (HPLC and UPLC-MS).

The Constabel lab has many years experience in the biosynthesis and regulation of phenolic compounds in poplar, and this project is part of our ongoing research to understand the biochemical and molecular basis of plant adaptation. We belong to the UVic Centre for Forest Biology, which comprises several research groups working on diverse aspects of forest and tree biology, including stress physiology, conifer reproduction, Douglas fir and poplar genomics, plant-pathogen interactions, and biochemical adaptations of plants. The Centre has outstanding greenhouse and growth facilities, provides access to shared equipment and analytical facilities, and actively supports graduate student research.

For more information and to apply, contact Dr. C. Peter Constabel (cpc@uvic.ca) (<http://web.uvic.ca/~cpc/>)

